UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,706	11/20/2001	Kazunori Numata	2001_1727A	9132

513 7590 12/02/2004

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
NGUYEN, CHAU M	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/988,706	NUMATA ET AL.	
	Examiner	Art Unit	
	Chau M Nguyen	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Novenber 20, 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *04/07/04, 07/25/03.* & 11/20/01
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of Applicant's claim for priority based upon:

b. Foreign Application Priority JP 2000-365439 filed on 30 November, 2000.

Claim Rejections - 35 USC § 102

2. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being unpatentable over Forrest et al. (Hereinafter "Forrest") (U.S. Pat. No. 4,709,413).

As claims 1, 3, 6 and 9, Forrest discloses an optical transmission system (fig. 2) for transmitting an optical signal from terminal (10) (including transmitter (16), col. 3, lines 11-15) to a terminal (12, including detector (22), col. 3, lines 20-23) through a multi-mode fiber (col. 3, line 34),

wherein the terminal (transmitter) (10) comprises:

a light emission element (16, col. 3, line 18) for generating an optical signal; and

at least one lens (30, col. 4, line 33-35) for converging the optical signal generated by the light emission element to focus at a focal point (col. 4, lines 36-39).

wherein:

the optical signal converged by the at least one lens (such 30, see fig. 2) enters an input plane of the multi-mode fiber (14) to propagate through the multi-mode fiber (col. 3, lines 63-67), and is outputted from an output plane of the multi-mode fiber at the other end (end at 12);

the receiver (such terminal 12, col. 3, lines 20-23) comprises a light receiving element (22) for receiving the optical signal outputted from the multi-mode fiber (14); and

the input plane is placed at a position (at the center of hole 32, see fig. 2, col. 36-39) other than the focal point, and the light receiving plane (26) of the light receiving element is placed at a predetermined distance from the output plane (of fiber) (also fig. 2, col. 4, lines 40-44).

As claims 2 and 4, Forrest (fig. 2) shows the input plane (of fiber 14) is placed at a position farther away from the at least one lens than the focal point.

As claim 5, Forrest (fig. 2) shows element (22) (in associated with hole (74), col. 4, lines 42-44) as a receptacle for connecting to the multi-mode fiber to affix the input plane (of fiber) at a position other than the focal point.

As claims 7 and 11, the light receiving element of Forrest is a Si PIN photodiode (col. 12, lines 22-23).

As claim 8, Forrest discloses a photodetector (receiver) (22, see fig. 2, col. 3, lines 14-15 and lines 21-22) for receiving an optical signal outputted (such beam (24)) from a multi-mode fiber (14), comprising:

a light receiving element having a light-receiving plane (26) for receiving the optical signal from the output plane of the multi-mode fiber (14) (col. 3, lines 34-37) and

a receptacle (such (22), in associated with hole (74)), for connecting to the multi-mode fiber to affix the output plane at a predetermined distance from the light-receiving plane (26) (see fig. 2, col. 4, lines 40-44).

As claim 10, Forrest (fig. 2) shows the input plane (fiber 14) is placed at a position farther away from a vertex of the at least one lens (30) than the focal point.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Krivoslykov et al.(U.S. Pat. No. 5,370,643) is cited to show optical apparatus arrangement.

Jewell et al. (U.S. Pat. No. 6,243,508 B1) is cited to show electro-opto-mechanical assembly for a light source or receiver.

Murray et al. (U.S. Pat. No. 6,516,116 B1) is cited to show high speed optical receiver.

Asawa (U.S. Pat. No. 4,637,683) is cited to show method for alignment optical fiber connectors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau M. Nguyen whose telephone number is 571-272-3030. The examiner can normally be reached on Mon-Fri from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.M.N.
Nov. 16, 2004

Hanh Phan
Primary Examiner
11/24/04